

Diagram illustrating the components of a truss bridge cross-section:

- CHORDS**: The top and bottom horizontal members of the truss.
- TRUSS "LOWER" HORIZONTAL DIAGONAL (TYP.)**: The diagonal member in the lower half of the truss.
- TRUSS "UPPER" HORIZONTAL DIAGONAL (TYP.)**: The diagonal member in the upper half of the truss.
- HORIZONTAL STRUTS AT SPAN END ONLY**: Struts located at the ends of the span.
- SINGLE OR DOUBLE CANTILEVER**: Indicated for the top half of the truss.
- DOUBLE CANTILEVER ONLY**: Indicated for the bottom half of the truss.
- PANEL LENGTH (4' - 3" MAX.) TO BE**: Dimension indicating the length of the truss panels.
- TOP**: Label indicating the top of the truss.

0 MIN. TO 1' - 6" MAX.

CONSTANT THROUGHOUT SPAN

VERTICAL "FAR" TRUSS DIAGONAL (TYP.)

VERTICAL "NEAR" TRUSS DIAGONAL (TYP.)

VERTICAL STRUTS AT SPAN END ONLY

TRUSS & SIGN  $\phi$  2

Y = 5' - 0" MIN.

Y/2

CAMBER TRUSS 0.004 FT/FT FOR SINGLE CANTILEVER

2' - 0"

POST

VERTICAL 1" MAX. AT TOP OF POST

$\phi$  CHORD

1 1/4" (IN) CAPPED END ON SIDE OPPOSITE APPROACHING TRAFFIC

ALL TRUSS DIAGONALS AND STRUTS  
SHALL BE 1 1/2" (IN) PIPE (0.145" (IN) WALL)

CHORD SELECTION		
SIGN AREA (X TIMES Y) (FT <sup>2</sup> )	CHORD SIZE	
	NOM. DIAM.	WALL
50 OR LESS	2"	0.154"
50+ TO 100	2"	0.218"
100+ TO 150	2 1/2"	0.203"
150+ TO 200	3"	0.216"

## SINGLE CANTILEVER SIGN STRUCTURE

1. Vertical and horizontal clearance requirements shall be as shown on the Contract Plans.
2. No post splices permitted in lower third of height, nor closer than 3' - 0" to bottom chord, except as otherwise noted. No chord shop splices permitted in first two-thirds of the span, except as otherwise noted. A maximum of two splices are permitted in the post. For post or chord shop splice details, see **Standard Plan G-70.10**.
3. The back-up plates or rings for all full penetration welds shall be welded continuously to the joined pieces. This can be done by either a continuous fillet weld on the back side of the piece, or by a continuous weld in the root of the full penetration weld.
4. All bolt holes shall be drilled, and the diameter shall be 1/16" (in) larger than the nominal bolt diameter, except as noted.
5. The design and analysis of the structures has been done in accordance with AASHTO Standard Specification for Structural Supports for Highway Signs, Luminaires and Traffic Signals Dated 2001, using 90 MPH wind velocity and fatigue category - I.
6. Adjust post alignment in plane normal to roadway centerline by means of leveling nuts located below base plate to maintain upward slope in cantilever arm(s). Tighten anchor nuts above base plate in accordance with **Standard Specification Section 6-03.3(33)**.
7. Variable Message Signs (VMS) exceeding 700 lbs. and/or 200 sq. ft. shall not be installed on cantilever structure.
8. For electrical requirements, see **Standard Plan J-75.45**.



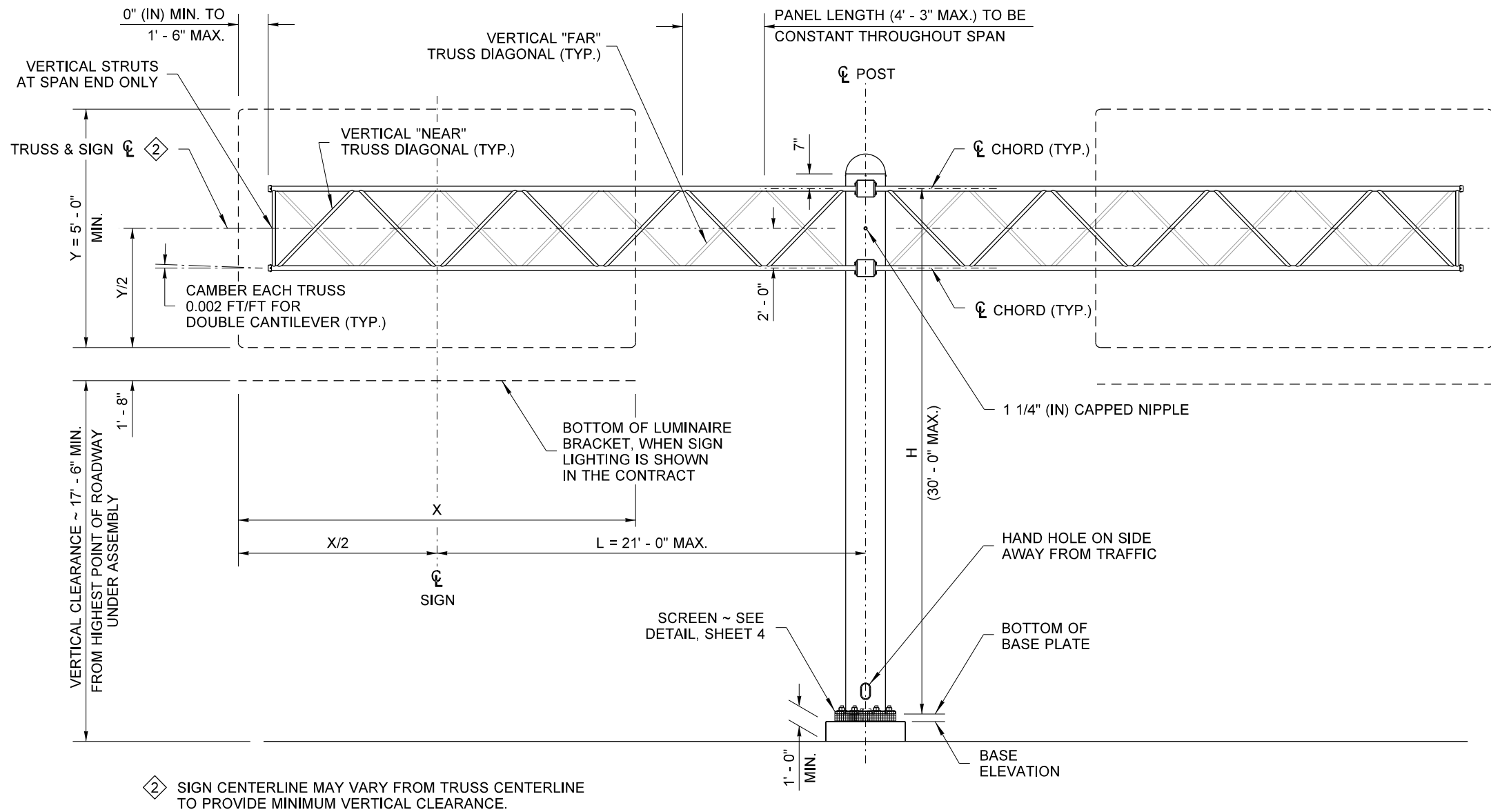
SHEET 1 OF 4 SHEETS

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STATE DESIGN ENGINEER

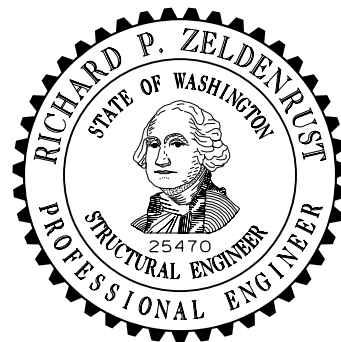
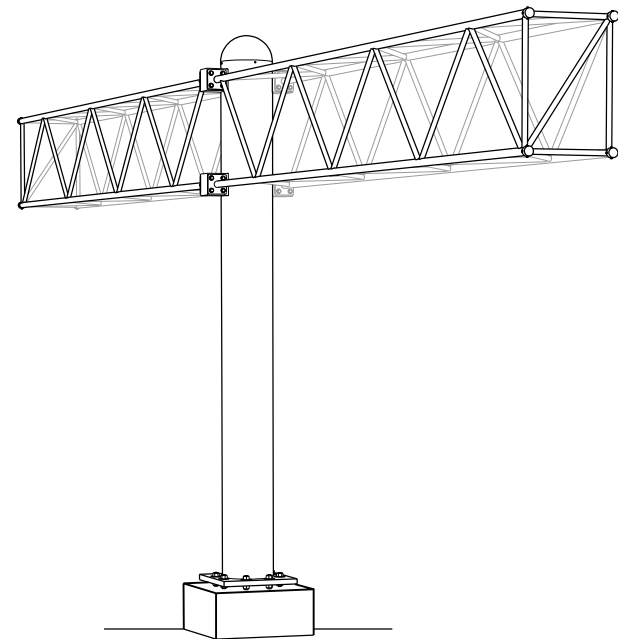
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ELEVATION

DOUBLE CANTILEVER SIGN STRUCTURE

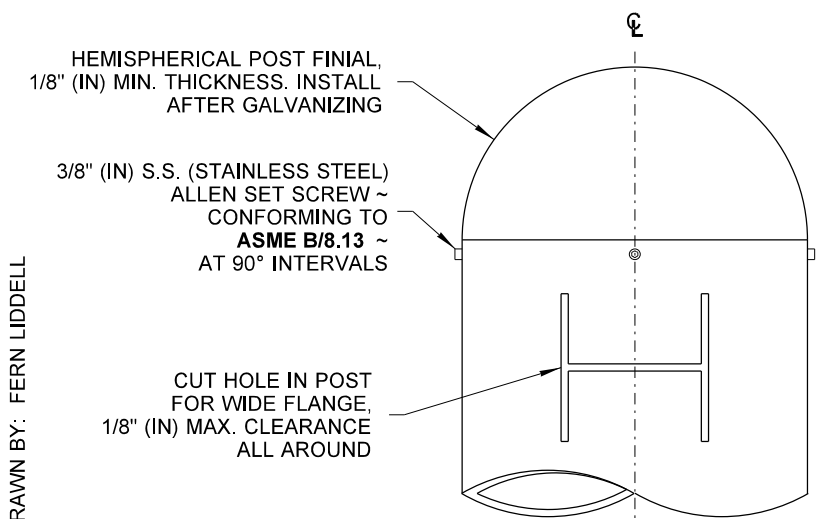


**CANTILEVER  
SIGN STRUCTURE  
(TRUSS TYPE)  
STANDARD PLAN G-60.10-04**

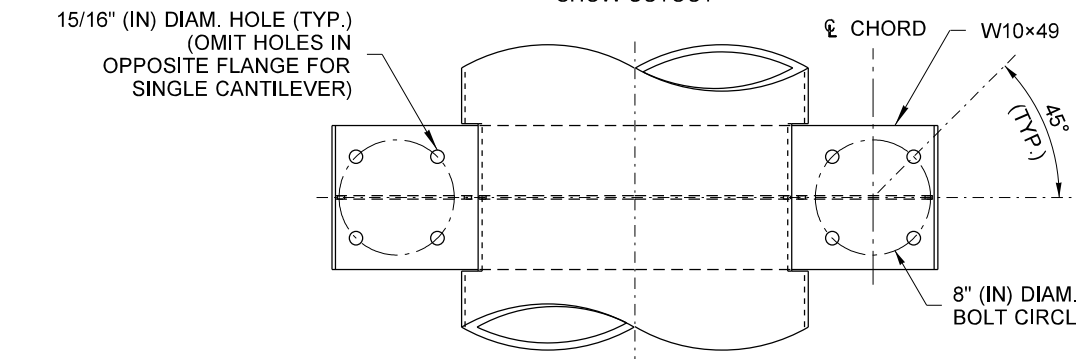
SHEET 2 OF 4 SHEETS

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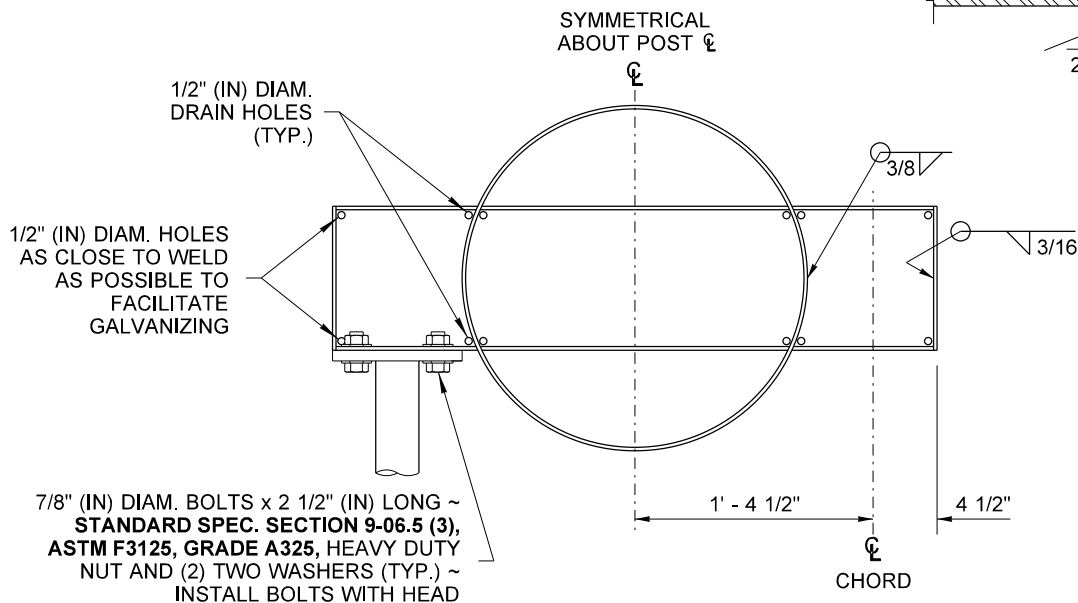
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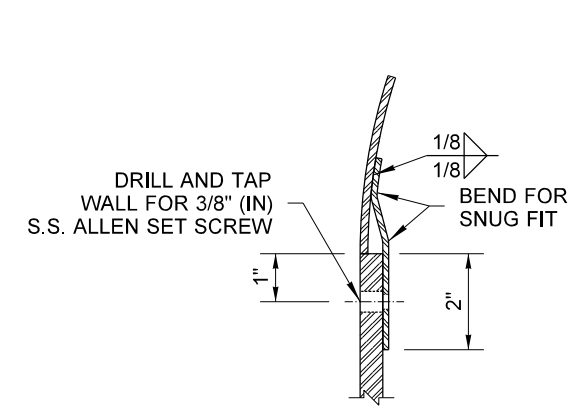
**ELEVATION**  
ROTATED 90° TO SHOW CUTOUT



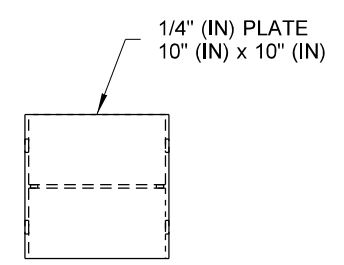
**ELEVATION**



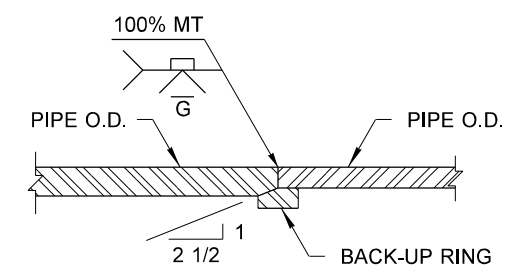
**CHORD TO POST CONNECTION DETAIL**



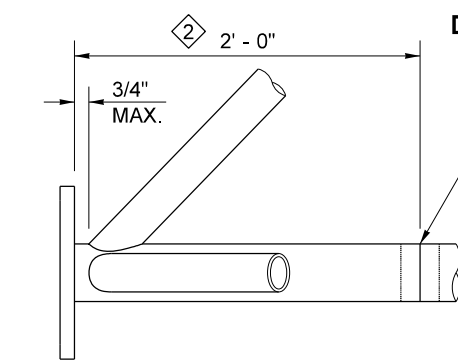
**SECTION THROUGH FINIAL AND POST**



**END OF CHORD**



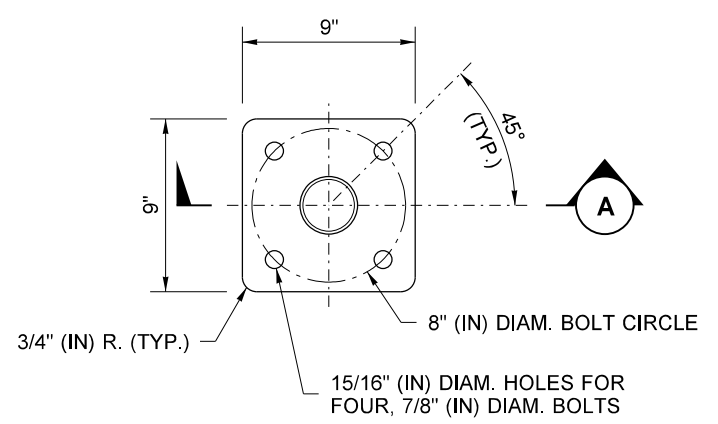
**DETAIL "D"**



**BASE ~ SIDE**

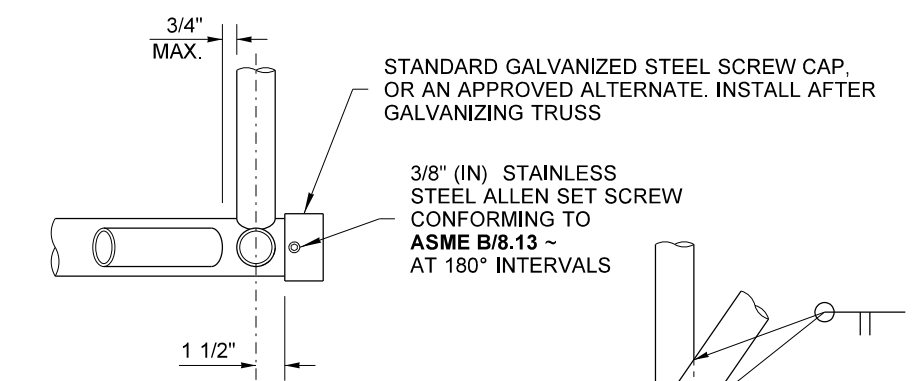
3" (IN) DIAM. PIPE (t = 0.300) SPLICE WITH 3" (IN) DIAM. PIPE (t = 0.216) (SEE CHORD SELECTION TABLE)

2 1/2" (IN) DIAM. PIPE (t = 0.276) SPLICE WITH 2 1/2" (IN) DIAM. PIPE (t = 0.203) (SEE CHORD SELECTION TABLE)

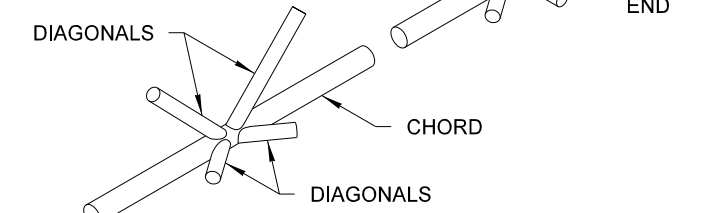
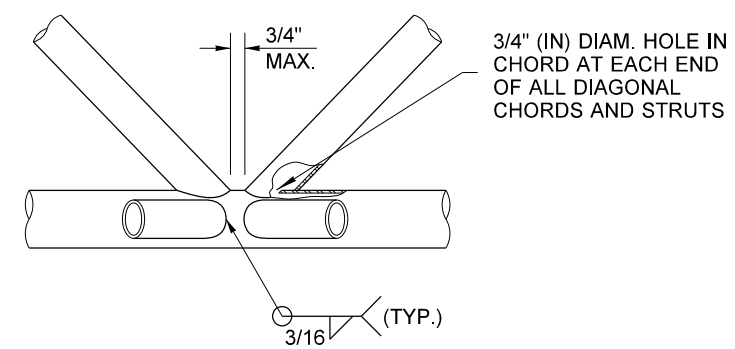
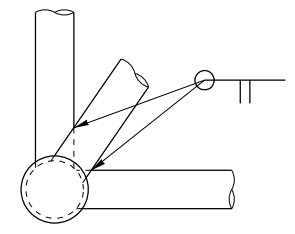


**BASE ~ TOP**

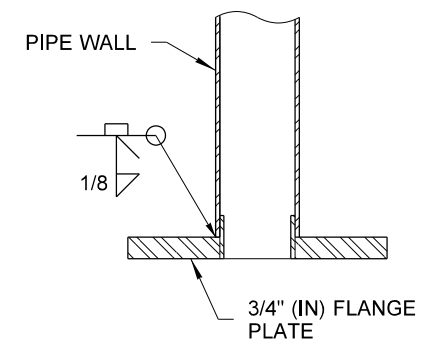
**TYPICAL TRUSS DETAILS**  
(ENDS OF DIAGONALS SHALL BE CUT TO FIT NEATLY AGAINST CHORDS)



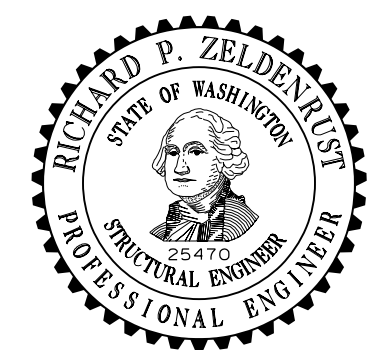
**SPAN END ~ SIDE**



**ISOMETRIC**



**SECTION A**



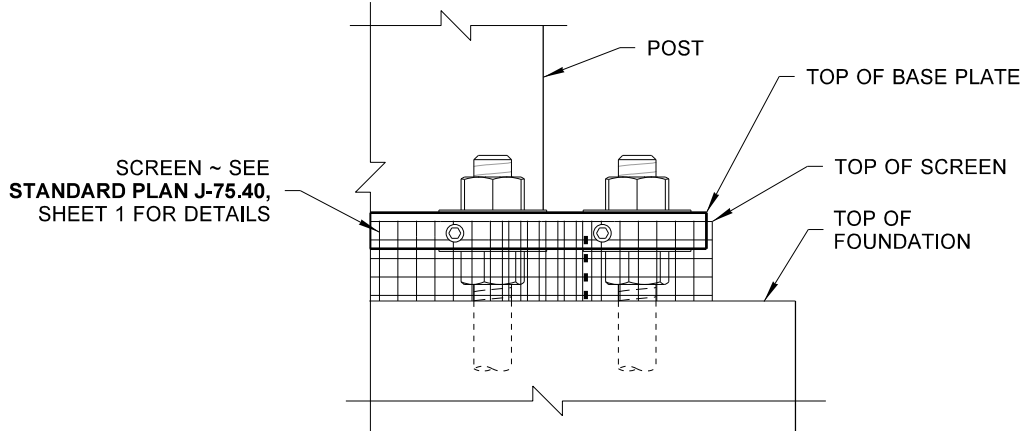
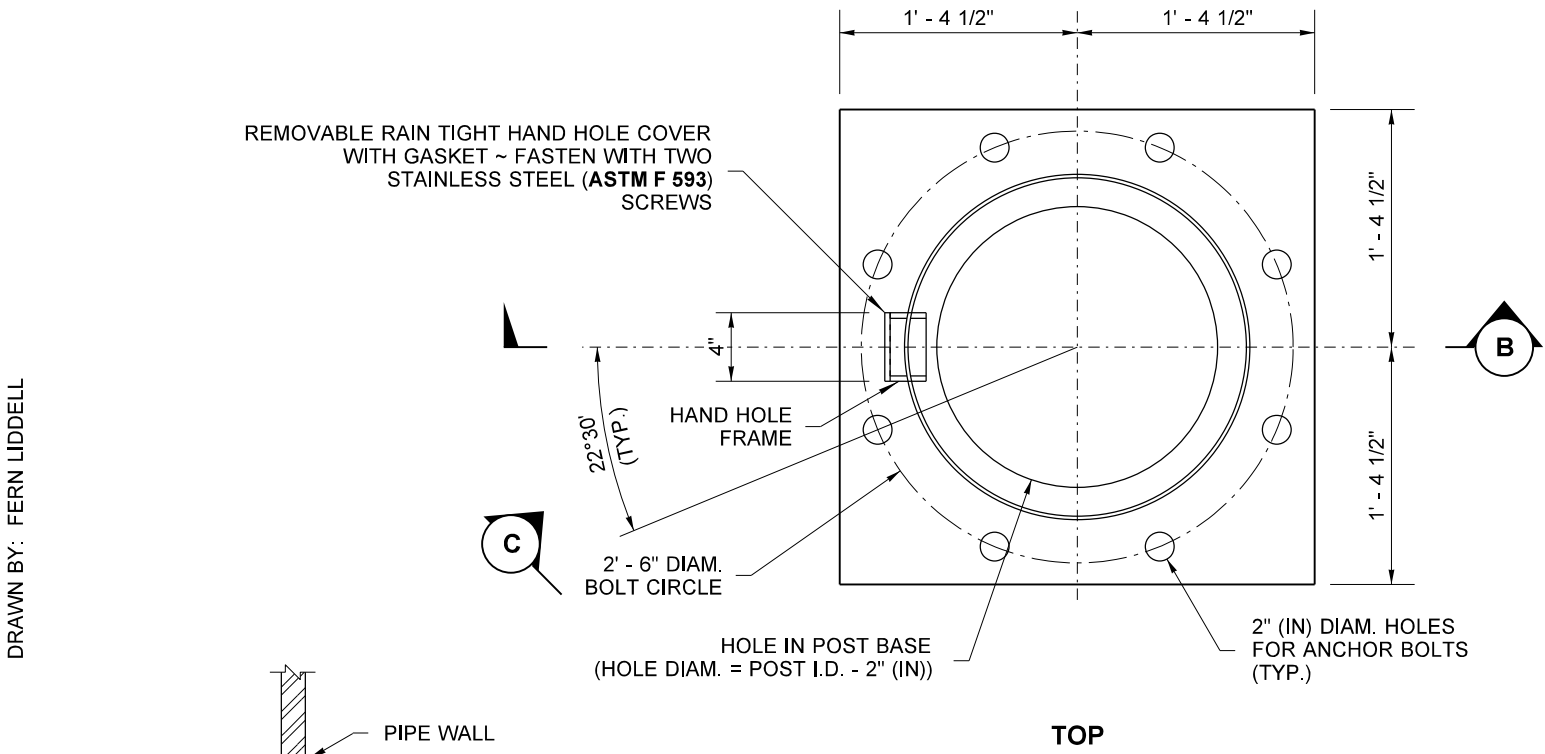
**CANTILEVER  
SIGN STRUCTURE  
(TRUSS TYPE)  
STANDARD PLAN G-60.10-04**

SHEET 3 OF 4 SHEETS

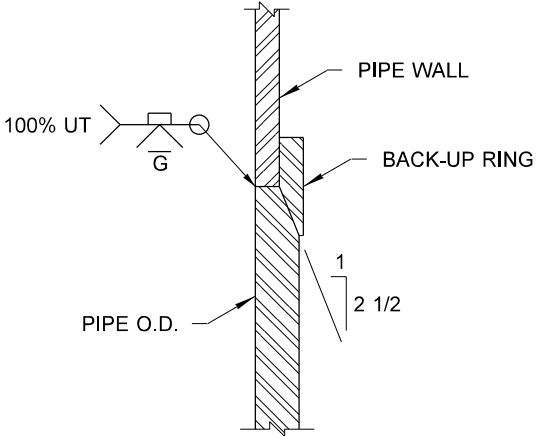
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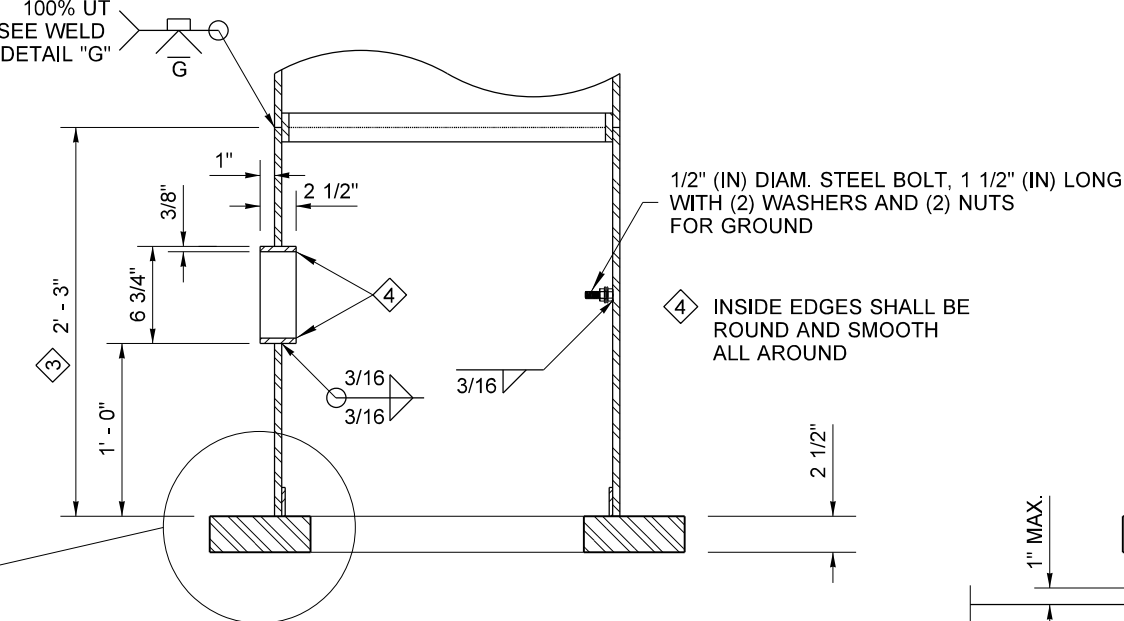
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SCREEN DETAIL



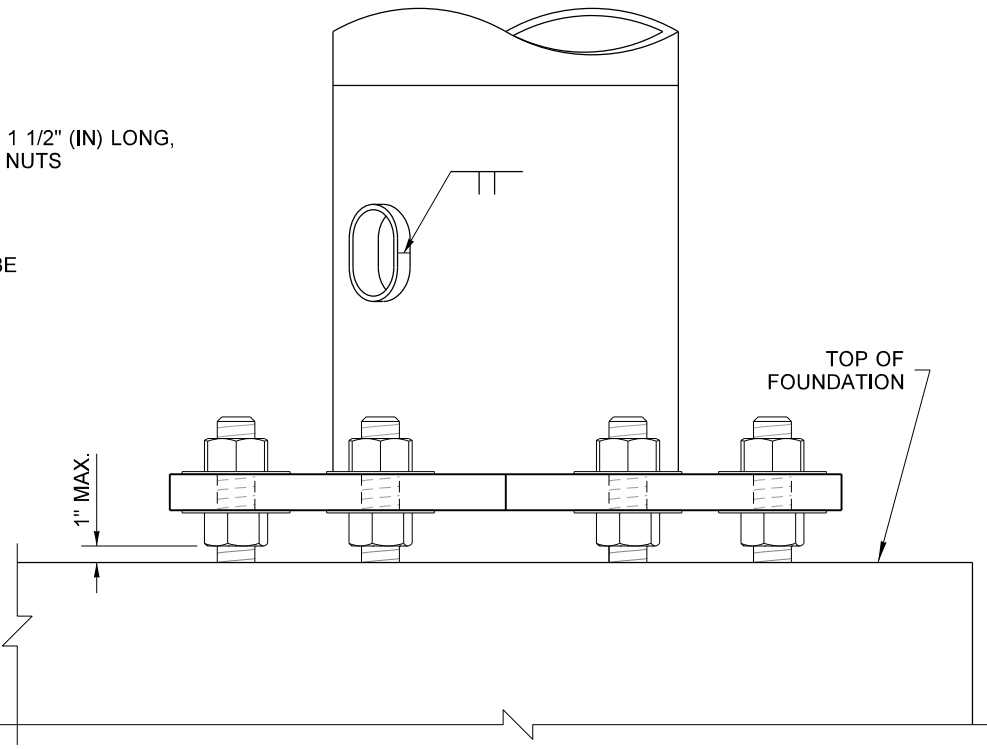
DETAIL "G"



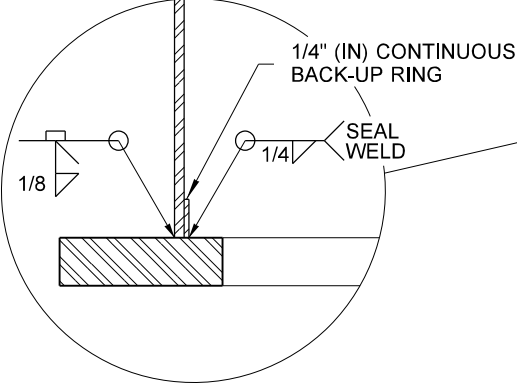
SECTION **B**

- 3 24" (IN) O.D. PIPE (t = 0.969) SPLICE WITH 24" (IN) O.D. UPPER POST (SEE POST SELECTION TABLE)
- 18" (IN) O.D. PIPE (t = 0.750) SPLICE WITH 18" (IN) O.D. UPPER POST (SEE POST SELECTION TABLE)

POST BASE DETAILS



VIEW **C**



BASE WELD DETAIL



**CANTILEVER  
SIGN STRUCTURE  
(TRUSS TYPE)  
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SHEET 4 OF 4 SHEETS

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